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AUTHOR Rumberger, Russell W.
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ABSTRACT

An analysis illustrating the direct and indirect role of government policy in generating employment begins by documenting the level and composition of government spending over the last 50 years. In 1929, federal, state, and local expenditures amounted to 10 percent of the Gross National Product (GNP); by 1980, government expenditures represented one-third of the GNP. The next section examines the employment generated by different types of government spending in 1980--the number of jobs, the types of jobs, and the types of workers who held these jobs. Government spending generated 34 percent of all civilian employment in 1980. More than 40 percent of the jobs in the public sector were high-level professional and managerial jobs, compared to 2[illegible] percent of the jobs in the private sector. The public sector generated more than one-third of all high-level jobs for women in 1980--over 50 percent for black women. The last section of the analysis discusses the consequences of shifting government spending from one category to another. An increase in defense spending will create jobs in aircraft, ordnance, and other manufacturing industries. A reduction in federal nondefense spending or in state and local purchases will reduce employment opportunities for college graduates, women, and minorities more than for other groups of workers. (MLF)

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Project Report No. 83-A11

THE EMPLOYMENT IMPACT OF GOVERNMENT SPENDING

Russell W. Rumberger

May 1983

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Russell W. Rumberger is a Research Associate with the Institute for Research on Educational Finance and Governance, Stanford University.

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Abstract

This paper estimates the level and composition of employment generated from government spending in 1980. Expenditures from the federal, state, and local levels of government represented one-third of the Gross National Product in 1980. Government spending generated 16 million jobs in the public sector and another 16 million jobs in the private sector through purchases and transfer programs. Altogether, government spending generated 34 percent of all civilian employment in 1980. Women, minorities, and college graduates have benefited particularly from the growth of government spending. Government expenditures in 1980 generated 60 percent of all professional and managerial jobs held by women and 50 percent of all jobs held by college graduates.

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Unemployment remains one of our country's most pressing economic problems. By the end of 1982, 12 million Americans were out of work or almost 11 percent of the labor force (U.S. President 1983, p. 198). Unemployment has reached the highest levels since the Great Depression. While the current economic recession has contributed to this high level of unemployment, some government economists believe that much of the current unemployment arises from frictional and structural factors (U.S. Congressional Budget Office 1983). Further, recent government projections suggest that unemployment levels will remain high at least over the next five years even with sustained economic growth (U.S. President 1983, p. 144; U.S. Congressional Budget Office 1983a, p. 7). Clearly one of the most pressing economic policy questions concerns how to generate more jobs in the economy.

Many economists and government officials believe that the private sector is the most important arena for generating jobs. Government should primarily aid employment growth indirectly, by stimulating economic growth in the private sector of the economy. To achieve this, President Reagan has cut taxes, which has increased disposable income, reduced government regulations, and cut at least some types of government spending. Although the President has been unable to actually reduce total government spending at the federal level, he has at least attempted to curtail its growth.

While these policies may help to revitalize the private sector of the economy, they ignore the direct role the government plays in creating jobs--in the private as well as the public sectors of the economy. The importance of the public sector as a source of jobs has received considerable attention. The proportion of the labor force employed in the local, state, and federal levels of the public sector grew rapidly between the early 1950s and the mid 1970s--from 13 percent of nonfarm employment in 1950 to over 19 percent of nonfarm employment in 1975. Since 1975 the proportion has declined slightly, reaching 18 percent in 1980 (Tucker 1981, p. 20).

The public sector not only employs a significant portion of the work force, but the type of employment it provides and who it employs differ markedly from the private sector. A higher proportion of the jobs in the public sector are in professional and managerial areas compared to the private sector. Wages also appear to be higher in the public sector, although during the late 1970s this premium eroded as public budgets contained pay increases for government workers (Smith 1977; Rumberger 1983). Public employees enjoy greater fringe benefits and job security as well (Quinn 1979; Long 1982). Finally, the public sector has served as an important source of jobs for women and minorities (Brown and Erie 1981; Rumberger 1983).

In addition to generating public sector employment, government spending creates jobs in the private sector of the economy, both through direct purchases of goods and services and through personal consumption financed by unemployment, social security, and other social programs that provide transfer payments to individuals. This aspect of government-generated employment has received very little attention, although it creates a significant portion of the jobs in the private sector. Government purchases of goods and services alone generated 8 million jobs in the economy in 1980, almost 10 percent of private sector employment (U.S. President 1982, Table G-5). Some industries benefit more than others from government purchases. For example, over 30 percent of employment in the construction industry in 1976 was due to government purchases, particularly by state and local governments (Thurow 1980, Table 4). The differential employment impact of different categories of government purchases have also been investigated. Some analysts claim that defense spending generates fewer jobs than nondefense purchases, while others dispute those claims (Employment Research Associates 1982; U.S. Congressional Budget Office 1983b). But little is known about the types of jobs generated from government purchases or the workers who hold those jobs.

Still less is known about the employment impact of transfer payments. Transfer payments finance personal consumption, but since

these payments often go to persons with low-incomes, their impact differs from other personal consumption. Many of these purchases are spent on basic necessities--food, clothing, shelter, and health care. Government social programs, including transfer payments, support a large portion of the service industry, especially in the medical and educational areas (Ginzberg 1976). These industries have provided a large number of jobs for women (Brown and Erie 1981, 1982). But again little is known about the type of jobs generated from government transfer programs.

This paper estimates the employment impact of government spending in the private as well as the public sectors of the economy. The next section documents the level and composition of government spending over the last fifty years and analyzes the impact of government purchases on different industries in the private sector. The following section examines the employment generated by different types of government spending in 1980--the number of jobs, the types of jobs, and the types of workers who hold those jobs. The last section discusses the consequences of shifting government spending from one category to another.

The Growth and Distribution of Government Spending

Over the last 50 years government expenditures have grown tremendously, both in current dollars and as a portion of total economic demand. In 1929, federal, state, and local expenditures amounted to $10 billion or 10 percent of the Gross National Product (Table 1). By 1980 government expenditures exceeded $800 billion, representing one-third of the Gross National Product. Expenditures increased at both the federal and regional levels during this period. Federal spending increased most rapidly in the 1930s because of New Deal programs, while state and local spending increased most rapidly during the 1960s due to the rapid expansion of education and other social services.

Not only has the level of government spending increased over the last fifty years, but its composition has changed as well. During most

of this period, roughly 50 percent of the federal budget was used to purchase goods and services, with half of this amount used to compensate government employees and the other half used to purchase goods and services in the private sector (Table 2). By 1980, however, only one-third of the federal budget was used to purchase goods and services. The remainder was used to fund transfer payments to individuals, grants-in-aid to state and local governments, and other activities, including paying off the federal debt. Transfer payments have captured an increasing share of the federal budget since 1960 and now comprise over 40 percent of federal expenditures. Grants to state and local governments also increased over this period.

Almost all state and local expenditures are used to purchase goods and services. Over 50 percent of state and local expenditures were used to compensate government employees in 1980 and another 42 percent were used to purchase goods and services in the private sector. The remainder was used for transfer payments, with other activities (primarily surpluses from government enterprises) contributing a net income. The composition of spending by state and local governments has remained quite similar over the last 50 years.

Government purchases of goods and services in the private sector support a substantial portion of the private economy. Purchases in 1980 by all levels of government exceeded $265 billion (U.S. Bureau of Economic Analysis 1982, Table 3.7B). The pattern of this spending on the industrial sectors of the economy differs markedly from other private spending. The patterns of spending within government also vary by activity and level.

The patterns of private and government spending by industrial sectors can be ascertained from the Input-Output (I-O) tables of the U.S. economy. These tables, which are prepared about every five years by the U.S. Bureau of Economic Analysis, show the sources of final demand for the output of the U.S. economy. These sources are: sales to consumers, sales to business for investment, net sales to foreigners (net exports), and sales to government (Ritz 1979, p. 35). Their sum

equals Gross National Product (GNP). The I-O tables also show the gross output of each industry, consisting of sales to other producers as well as final demand, which can be used to show the direct and indirect effects of changes in demand (Ritz 1979, p. 37).

Table 3 shows the patterns of private and government spending on goods and services within major industries of the private sector as well as a selected number of more detailed industries--ordinance, aircraft, business services, and medical, educational, nonprofit services. Government purchases are broken down by federal government, both defense and nondefense, and by state and local government. These patterns are based on the 1972 I-O tables, which are the latest figures currently available (Young and Ritz 1979).[1] In addition, the table shows the impact of transfer payments to individuals, which is actually a component of private spending although it is financed by government. This pattern is ascertained from detailed 1963 I-O tables, although the patterns appear similar to patterns based on less detailed information for 1972 (Stern 1975).

The figures reveal the differential impact of private and government spending. Federal defense and nondefense purchases are much more concentrated in manufacturing industries than either private or state and local government purchases. Federal nondefense and state and local purchases are more concentrated in service industries than other purchases. Transfer payments are concentrated in only a few industries since they are used primarily to purchases basic necessities--food, clothing, shelter, and medical services.

Not only are government purchases concentrated on different industries than private spending generally, some industries depend on government purchases for a significant portion of their product. Defense purchases accounted for 75 percent of total final demand for the ordnance industry in 1972, while 50 percent of total final demand for the aircraft industry originated from government purchases. The construction industry depended heavily on government purchases as well, especially from state and local government. Service industries also

benefited from government spending. Overall, 20 percent of all purchases in the private sector of the economy originated from government spending.

Employment Generated by Government Spending

Government spending generates employment in the private and public sectors of the economy. The level and composition of this impact was estimated for the economy in 1980 using spending information from the 1972 I-O tables and employment information calculated from the March 1980 Current Population Survey. Although the distribution of government purchases was based on 1972 I-O data (1963 data for transfer spending), the level of spending within each category was updated to 1980 using data from the National Income and Product Accounts (U.S. Bureau of Economic Analysis 1982, Table 3.7B). Estimates were updated to 1980 rather than using 1972 information in order to capture the increases in government spending (especially for transfer programs) that took place over that period. In other words, the employment impact of government spending increased substantially between 1972 and 1980 because of the growth in government budgets, especially entitlement programs.

This information was used to estimate the types of jobs generated from government spending as well as the amount of employment. Instead of using Census occupation categories to differentiate among jobs, detailed Census occupation codes were grouped into three occupational levels: high, middle, and low.[2] High-level jobs, which cover most professional and managerial occupations, offer the highest salaries and carry the most decisionmaking responsibility; middle-level jobs comprise the majority of jobs in the economy; and low-level jobs represent the least skilled and lowest paid jobs. The estimated level and composition of civilian employment generated from government spending in 1980 is shown in Table 4.

Total civilian employment equaled 96 million in 1980.[3] Of that total, about 16 million persons were employed in the public sector; another 8 million persons in the private sector owed their jobs to

government purchases of goods and services;[4] and another 8 million workers in the private sector were employed because of personal consumption financed through government transfer programs. Altogether, more than 32 million jobs--representing 34 percent of all civilian employment in the United States--was generated from government spending in 1980.

The composition of employment generated from government spending differs from the composition of employment in the private sector generally. More than 40 percent of the jobs in the public sector are high-level, professional and managerial jobs, compared to one-quarter of the jobs in the private sector. Government spending in the private sector also creates somewhat more high-level positions than the private sector overall. In contrast, government spending generates a smaller proportion of low-level jobs than private sector spending. Government spending overall generated 42 percent of all professional and managerial jobs in the U.S. economy in 1980, but only 26 percent of all low-level jobs. Not only does the government generate a substantial portion of the jobs in the U.S. economy, it generates an even greater portion of the high-level, professional jobs.

Government spending also generates a large portion of the jobs held by college graduates. One-third of all college graduates were employed in the public sector in 1980 (Table 5). Another 17 percent who were employed in the private sector owed their jobs to government purchases and transfer payments. Altogether government spending generated 50 percent of all jobs held by college graduates in 1980.

The employment generated from government spending benefits some race and sex groups more than others. A greater proportion of women than men are employed in the public sector. Black women especially have benefited from public sector employment--more than one-quarter held government jobs in 1980 compared to 14 percent for white men and 18 percent for black men. Government spending in the private sector employs a similar proportion of all groups. In terms of total

employment generated from government spending, black women benefit the most while other race and sex groups benefit more equally.

Among persons holding professional and managerial jobs, race and sex differences in the benefits of government spending are more pronounced. The public sector generated more than one-third of all high-level jobs for women in 1980--over fifty percent for black women. The public sector provides the majority of teaching jobs and many health jobs, which account for a large proportion of professional and managerial employment opportunities for women. The public sector also provides a larger proportion of high-level positions for minority males than for white males. In contrast, government spending in the private sector generates a larger proportion of high-level positions for men than for women.

Similar patterns occur in employment opportunities for college graduates. The public sector provided over 40 percent all jobs held by white and Hispanic female college graduates and almost two-thirds of the jobs for black female college graduates in 1980. Including employment in the private sector, government spending generated over 50 percent of all jobs for female college graduates in 1980 and almost three-quarters of all the jobs for black female college graduates. Black and Hispanic male college graduates also depended more than white males on employment opportunities generated from government spending.

Assessing the Employment Impact of Government Policies

Government spending generates a sizeable portion of all the jobs in the U.S. economy. Some industries and some workers benefit more than others from this impact, however. The construction industry, some manufacturing industries--especially those in defense--and business services benefit from government purchases. Wholesale and retail trade and service industries--especially in medical and educational areas--benefit from individual consumption financed by transfer programs. College graduates, minorities, and women benefit more than other workers

from the jobs generated by government spending in the public as well as the private sector.

Government spending arises from a variety of policies and programs enacted at the federal, state, and local level. These activities change over time, shifting the composition as well as the level of government spending. Between 1980 and 1982, for example, government expenditures increased 24 percent and grew from 33 percent of the Gross National Product to over 35 percent (U.S. President 1983, Tables B-1, B-75). Defense spending has captured an increased share of the federal budget, lowering the share for social programs (Waite and Wakefield 1982). How will these changes affect employment?

Table 6 shows the average number of jobs created in the public and private sectors of the economy from each billion dollars of government spending and private spending. The private sector impact is desegregated by major industries and selected detailed industries. Government spending is disaggregated into defense and nondefense categories at the federal level, state and local spending, and transfer payments originating from all levels of government. Although the figures only show the average number of jobs generated by each billion dollars of government and private spending based on 1980 levels, they do suggest the marginal number of jobs created or lost from shifting spending patterns from one category to another.

The estimates reveal that most types of government spending generate more jobs than private spending. In particular, federal nondefense spending and government spending at the state and local level generate about 50,000 civilian jobs per billion dollars while defense spending, transfer programs, and private spending each generate about 30,000 jobs per billion dollars. If military jobs are included in the figures, then the number of jobs generated by defense spending increases to about 46,000. Although the actual figures differ, the general patterns in these estimates are consistent with government estimates using other data and techniques (U.S. Bureau of Labor Statistics 1975; U.S. Congressional Budget Office 1983b, p. 43).

While the number of jobs generated from various types of government spending (excluding transfer payments) are similar, the location of the jobs varies widely. Federal nondefense purchases and state and local purchases generate many more jobs in the public sector than other types of spending. In contrast, private spending and transfer programs, which subsidize private spending, generate more jobs in the private sector.

Different industries in the private sector benefit from the various types of government spending. One billion dollars of federal purchases for either defense or nondefense activities generates from 7,000 to 9,000 jobs in manufacturing, similar to the number of jobs generated from private spending. But those jobs are concentrated in different manufacturing industries. A billion dollars of defense spending generates over 2,000 jobs in the aircraft industry alone. Nondefense spending generates more jobs in service industries. A billion dollars spent on transfer programs generates almost 10,000 jobs in service industries with over 5,000 of those in medical, educational, and nonprofit services. Employment in retail and wholesale trade is almost entirely dependent on transfer and other private spending.

Clearly a shift in spending patterns will affect the number and location of jobs in the economy. An increase in defense spending will create jobs in aircraft, ordnance, and other manufacturing industries while a cut in transfer programs will eliminate jobs in medical, educational, and other service industries. An increase in private spending at the expense of government spending will cause a net reduction in the number of jobs in the economy. For example, a $1 billion reduction in federal nondefense spending coupled with a $1 billion increase in private spending will decrease employment by 20,000.

Shifts in spending patterns will also affect the composition of jobs in the economy and job opportunities for various types of workers. Since public sector employment provides more professional employment opportunities and benefits college graduates, women, and minorities more than other groups of workers (Tables 4 and 5), a reduction in federal

nondefense purchases or in state and local purchases will reduce employment opportunities for these groups.

This analysis illustrates the importance of government spending as a source of employment in the economy. Yet rarely is this impact discussed. In only a few instances, such as public service employment programs, do lawmakers consider the employment impact of government spending. But whether they discuss it or not, every policy has a direct impact on the level and composition of employment in the economy.

Although private spending generates the majority of jobs in the U.S. economy, government spending plays an important role as well. At a time when unemployment is so high, lawmakers should consider both the direct and indirect role of government policy in generating employment.

Footnotes

[1]The I-O tables used in these calculations are based on the 85 2-digit industry codes. I-O tables based on 3-digit industry codes are also available, but were not used to save computational expenses. Although the I-O tables are integrated with the National Income and Product Accounts, the figures for final demand may vary slightly between the two systems. For more information, see Young and Ritz (1979), p. 1.

[2]The classification of occupations was based on information from the Dictionary of Occupational Titles on the relative skill levels of jobs. For more detailed information on this procedure, see Rumberger and Carnoy (1980). Although this classification scheme is not the only one that could be used to differentiate among occupations, it is highly correlated with earnings and other measures of labor market standing.

[3]This figure is slightly lower than published figures because: (1) published figures are based on annual averages, which for 1980 was about 2 million more than employment in March, and (2) the present figures exclude about 1 million persons who were working without pay.

[4]The estimated employment impact of government purchases in the private sector correspond with estimates from the U.S. Bureau of Labor Statistics. See U.S. President (1982), Table G-2.

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Table 1

Gross National Product and Government Expenditures,

Selected Years, 1929-80

	1929	1940	1950	1960	1970	1980
Gross National Product ($ billion)	103.4	100.0	286.5	506.5	992.7	2633.1
Government Expenditures ($ billion)[a]	10.3	18.4	61.0	136.4	313.4	871.2
Federal	2.6	10.0	40.8	93.1	204.3	602.1
State and Local	7.8	9.3	22.5	49.8	133.5	357.8
Government Expenditures (% of GNP)[a]	10.0	18.4	21.3	26.9	31.6	33.1
Federal	2.5	10.0	14.2	18.4	20.6	22.9
State and Local	7.5	9.3	7.9	9.8	13.4	13.6

[a]Federal grants-in-aid to State and local governments are reflected in Federal expenditures. Total government expenditures have been adjusted to eliminate this duplication.

Source: U.S. Presiden.. (1983), Tables B-1 and B-75.

Table 2

Government Expenditures by Type, Selected Years, 1929-80

(Percentage Distribution)

	1929	1940	1950	1960	1970	1980
Federal Government						
Goods and Services	55	61	46	58	47	33
Defense	-	(22)	(34)	(48)	(36)	(22)
Nondefense	-	(39)	(12)	(10)	(11)	(11)
Compensation of Employees	(33)	(35)	(26)	(23)	(22)	(14)
Other	(22)	(26)	(20)	(35)	(25)	(19)
Transfer of Payments to Persons	27	16	27	23	30	41
Grants-in-aid to State and Local Governments	4	9	6	7	12	15
Other (including debt)	14	14	21	12	11	11
TOTAL	100	100	100	100	100	100
State and Local Government						
Goods and Services	95	87	88	93	93	95
Compensation of Employees	(45)	(46)	(45)	(51)	(53)	(53)
Other	(50)	(41)	(43)	(42)	(40)	(42)
Transfer Payment to Persons	3	14	16	11	11	11
Others	2	-1	-4	-4	-4	-6
TOTAL	100	100	100	100	100	100

Sources: U.S. Bureau of Economic Analysis (1981), Tables 3.2, 3.3, 3.7A; (1982), Tables 3.2, 3.3, 3.7B.

Table 3

Private and Government Spending in the Private Sector by Industrial Category, 1972

	Private Spending	Government Spending				
		Federal		State	Transfer	Total- as a % of
		Defense	Nondefense	Local	Payments	Total Demand[a]
Agriculture	3.5	0.1	-21.1[b]	0.6	3.5	4.0
Mining	1.3	0.0	0.2	0.0	0.0	0.3
Construction	5.8	3.6	14.3	25.3	0.2	29.0
Manufacturing	28.6	53.6	43.8	17.6	18.5	18.3
Ordnance	(.1)	(5.3)	(4.2)	(0.0)	(0.0)	(75.2)
Aircraft	(.5)	(13.8)	(3.0)	(0.0)	(0.0)	(50.2)
Transportation and Utilities	6.5	11.1	6.8	7.2	8.5	25.2
Wholesale and Retail Trade	25.9	3.3	3.8	2.4	31.6	14.9
Finance, Insurance, and Real Estate	7.6	0.1	7.1	5.0	5.5	14.0
Services	20.8	28.3	45.2	41.9	32.3	30.8
Business	(3.5)	(18.0)	(21.9)	(24.3)	(3.6)	(49.2)
Medical, Educational and Nonprofit	(9.9)	(5.3)	(19.2)	(15.7)	(18.7)	(29.8)
TOTAL[c]	100.0	100.0	100.0	100.0	100.0	20.6

[a] Total government spending divided by total demand (GNP).

[b] Negative signs indicate that sales by the government exceeded its purchase from the private sector.

[c] Totals may not add to 100 because of rounding.

Note: Private spending equals total final demand less government spending. Spending by the federal and state and local government covers the purchases of goods and services in the private sector. Transfer payments cover private purchases financed by transfer programs from all levels of government.

Table 4

Employment Generated from Private and Government Spending by Occupational Level, 1980

(numbers in millions of workers)

	Occupational Level			Total	
	High	Middle	Lower	Number	Proportion High Level[a]
Private Sector Employment	20.6	44.4	14.9	79.9	26
Private Spending	16.0	35.1	12.2	63.3	25
Government Spending	4.6	9.3	2.7	16.6	28
Federal	.9	1.9	.4	3.2	28
Defense	(.6)	(1.2)	(.3)	(2.1)	29
Nondefense	(.3)	(.7)	(.1)	(1.1)	27
State and Local	1.4	2.9	.6	4.9	29
Transfer Payments[b]	2.3	4.4	1.7	8.4	27
Public Sector Employment	6.7	7.6	1.6	15.9	42
Total	27.3	51.9	16.5	95.8	29
Proportion of Total Employment Generated from Government Spending	42	33	26	34	

[a]Employment in high-level jobs divided by total employment.

[b]From all levels of government.

Sources: Calculated from the March 1980 Current Population Survey (U.S. Bureau of the Census); Stern (1975), Table 9; Young and Ritz (1972), Table 1; and U.S. Bureau of Economic Analysis (1982), Tables 3.2, 3.3, and 3.7B.

Table 5

Proportion of Jobs in the Private and Public Sectors Generated by Government Spending, by Race, Sex, and Type of Job, 1980

	Males			Females			Total
	White	Black	Hispanic	White	Black	Hispanic	
All Jobs	31	35	28	36	45	34	34
Private Sector	(17)	(17)	(17)	(17)	(16)	(16)	(17)
Public Sector	(14)	(18)	(11)	(19)	(29)	(18)	(17)
High-level Jobs	36	46	39	50	68	51	42
Private Sector	(18)	(17)	(17)	(15)	(11)	(14)	(17)
Public Sector	(18)	(29)	(22)	(35)	(57)	(37)	(25)
Jobs Held by College Graduates	44	54	48	59	72	57	50
Private Sector	(19)	(15)	(17)	(15)	(8)	(15)	(17)
Public Sector	(25)	(39)	(31)	(44)	(64)	(42)	(33)

Sources: Calculated from the March 1980 Current Population Survey (U.S. Bureau of the Census); Stern (1975), Table 9; Young and Ritz (1972), Talbe 1; and U.S. Bureau of Economic Analysis (1982), Tables 3.2, 3.3, and 3.7B.

Table 6

Jobs Generated Per $1 Billion of Government and Private Spending, by Industrial Category, 1980

	Government Spending				Private Spending
	Defense[a]	Nondefense	State & Local	Transfer	
Private Sector	16,300	16,100	14,700	29,600	29,900
Agricultural	0	-3,400[b]	100	1,000	1,000
Mining	0	-1,000[b]	0	0	400
Construction	600	2,300	3,700	0	1,700
Manufacturing	8,700	7,000	2,600	5,500	8,505
Ordnance	900	700	0	0	0
Aircraft	2,200	500	0	0	200
Transportation and Utilities	1,800	1,000	1,000	2,400	1,800
Wholesale and Retail Trade	500	600	400	9,300	7,700
Finance, Insurance and Real Estate	0	1,100	700	1,600	2,300
Services	4,600	7,300	6,200	9,600	6,200
Business	2,900	3,500	3,600	1,000	1,000
Medical, Educational, and Nonprofit	900	3,100	2,300	5,500	3,000
Public Sector	13,700	35,000	35,000	-	-
Total	30,000	51,100	49,700	29,500	29,800

[a]Each $1 billion of defense spending also generates 15,900 military jobs.

[b]Negative signs indicate that sales by the government exceeded its purchases from the private sector.

Note: Numbers are rounded to nearest 100.

Sources: Calculated from the March 1980 Current Population Survey (U.S. Bureau of the Census); Stern (1975), Table 9; Young and Ritz (1972), Table 1; and U.S. Bureau of Economic Analysis (1982), Tables 3.2, 3.3, and 3.7B.